UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,753	11/16/2001	Heeloo Chung	35399.42	3370

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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	09/990,753	CHUNG ET AL.
	Examiner	Art Unit	
	Derrick W. Ferris	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,18-24,27-32 and 35-44* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,11,12,14,15,19-24,27,29-32,35-38 and 41-44* is/are rejected.

7)☒ Claim(s) *8-10,13,18,28,39 and 40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   This Office action is in response to applicant's paper filed 01/03/2007. **Claims 1-15, 18-24, 27-32, and 35-44** as amended are still pending.

2.   The examiner does **not withdrawn** the rejection to *Wynee; Wynee* in view of *Tran;* and *Wynee* in view of *Stallings* based on applicant's arguments with respect to the second 37 C.F.R. 1.131 filed on 1/23/200. As previously stated, <u>there is no factual evidence found in the affidavit</u> to support the claim recitations. In particular, the inventor or author's explanatory statements found in the declaration are not factual evidence. The examiner further notes that that upon further review, the examiner's supervisor also agrees with the above statement. Thus the rejection is made for lack of factual evidence provided by the affidavit. Please see particular comments concerning applicant's remarks below.

3.   The examiner **withdraws** the rejection to *Wildford* based on applicant's amendments and/or arguments.

4.   The examiner **withdraws** the rejection to *Barri* based on applicant's amendments and/or arguments.

Affidavit

5.   The declaration under 37 C.F.R. 1.131 filed on 1/23/2006 under 37 CFR 1.131 has been considered but is ineffective to overcome the *Wynee et al.* and *Tran* references.

6.   The evidence submitted is insufficient to establish applicant's alleged actual reduction to practice of the invention in this country or a NAFTA or WTO member country after the effective date of the *Wynee et al* reference.

With respect to items 6 and 7 of applicant's declaration and Exhibit A, it is unclear where

the claimed subject matter is supported in the Exhibits. In particular, the examiner found no

evidence that Exhibit A teaches at least an input for receiving packets of data, *each packet*

associated with an output queue or equivalent. Specifically, the above issue is where the factual

evidence is found *in Appendix A* to support the claim recitation above. Here applicant argues

that the above limitation is taught at page 1 of the Exhibit which illustrates that the Cougar is the

buffer/queue manager. The examiner notes that page 1 of the Exhibit fails to teach an input for

receiving packets of data, *each* packet associated with an output queue. In particular, assuming

that the input for receiving packet data is the Front End C-port interface as shown in the figure

and argued by applicant's remarks, the figure further fails to teach where each received packet is

associated with an output queue. Applicant appears to argue that each packet received has an F-

10 header where an F-10 header is associated with an output queue. Applicant appears to further

argue that the information provided on pages 16-17 of Exhibit A show that the packet header

information for a Couger interface is an F-10 header. The examiner respectfully disagrees. Not

explicitly taught by the figure is an F-10 header. Instead the figure teaches a packet header

format for Cougars. The examiner furthermore notes that where the packet header is applied is

further not taught by pages 16-17. Thus it is not clear that the packet header is applied to output

queues. It is further not clear that the packet header shown on pages 16-17 enters the front End

C-port interface shown in the figure on page 1 of the Exhibit. As such, applicant argues that the

above interpretation(s) and description are further supported in applicant's declaration (and not

Exhibit) at paragraph 6. The examiner notes that paragraph 6 of the declaration provides no

further *factual evidence* to substantiate the above claim. The examiner notes that paragraph 6

further provides no evidence found prior to July, 18 2001 to support the above claim recitation at issue.

In addition, the examiner found no evidence that Exhibit A teaches at least an intermediate storage facility manager configured to assign particular blocks of the intermediate storage facility *to output queues, and store one or more packets associated with output queues into blocks assigned to those output queues* or equivalent for the same reason as mentioned above. In particular, there is no further description with respect to the figure shown on page 12 of the exhibit. Thus it is unclear that "p1a" is a part "a" of a "packet 1" as argued by applicant. Again, the examiner found no factual evidence supported in the appendix.

In conclusion, the rejections are maintained since not enough factual evidence was provided in the declaration.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   **Claims 1-4, 6, 7, 11, 15, 19, 27, 29, 32, 35-38, 41 and 42** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application 2003/0016686 A1 to *Wynee et al.* ("*Wynee*").

As to **claim 1**, see e.g., figure 2b where the input for receiving packets of data, each packet associated with an output queue is taught e.g., as the protocol processor 20. Specifically, the protocol processor 20 segments the received packet(s) on bus 12a into cells and then stores the sequence of cells in internal memory using traffic manager 22. The packet is associated with an output queue based on the flow ID of the packet which reflects the VOQ of the packet. An intermediate storage facility having a plurality of blocks is taught as cell memory 32, see e.g., figure 32. An intermediate storage facility manager is taught e.g., as traffic manager 22 or as data path controller 30 and queuing system 36. As such, traffic manager 22 or data path controller 30 and queuing system 36 are configured to assign particular blocks of the intermediate storage facility to output queues, and store one or more packets associated with output queues into the blocks assigned to those output queues. In particular, cells are stored in blocks and given a BLOCK_ID.

As to **claim 2**, the pointer repository is taught as the queue used to store the BLOCK_IDs (i.e., pointers). A trunk manager is taught e.g., as also data path controller 30 and queuing system 36 where the trunk is the packet flow.

As to **claim 3**, packets are broken down into one or more cells, these cells are stored in blocks in cell memory 32 and then outputted to a common output port corresponding to a VOQ.

As to **claim 4**, the cells are stored prior to entering the traffic manager 22, see e.g., paragraphs 0036-0038 on page 3.

As to **claim 6**, see e.g., paragraph 0037 on page 3.

As to **claim 7**, the second storage facility is the traffic manager for the output port, see e.g., figure 2b with respect to figure 3. The intermediate storage manager is traffic manager 26 or data path controller 30 and queuing system 36. A command is the LOAD command as taught by the reference.

As to **claim 11**, the output queue manager is the traffic manager 26 or data path controller 30 and queuing system 36

As to **claim 15**, see similar rejection to claim 1. In particular, since the traffic manager 22 or data path controller 30 and queuing system 36 are configured to assign particular blocks, they are configured to sort the data packets into groups, see e.g., paragraph 0042 on page 4.

As to **claim 19**, the second block storage memory is output queues 37 shown e.g., in figure 3 which is coupled to the data path controller (i.e., buffer memory manager).

As to **claim 22**, each cell is stored in internal memory, see e.g., paragraph 0035 before being sent to the traffic manager.

As to **claim 23**, see e.g., figures 2a and 2b where the protocol processors 20 and 28 are the packet processors coupled to one or more of the input ports and output ports.

As to **claim 24**, see similar rejection to claim 1. In addition, note that the switch fabric is cross-point switch 16 shown e.g., in figure 1. Also note that the routing controller 18 is responsible for a scheduler configured to direct the packet buffer memory to output the groups through the switch fabric, see e.g., paragraph 0035 on page 3.

As to **claim 27**, see e.g., see e.g., figure 3 where the command is the read/write command.

As to **claim 29**, see similar rejection to claim 19.

As to **claim 32**, see similar rejection to claim 24.

As to **claim 35**, see similar rejection to claim 1.

As to **claim 36**, the list of blocks are stored by the queuing system 36, see e.g.,

figure 4.

As to **claim 37**, the predetermined group is based on the flow ID (i.e., FIN). As

such, the data path controller 30 also reads from the memory device or cell memory 32.

As to **claim 38**, see similar rejection to claim 7.

As to **claim 41**, each flow is related by a block ID.

As to **claim 42**, the added pointers are the block ID values, see e.g., paragraph

0044 on page 4.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   **Claims 5, 12, 14, 20, 30, 43 and 44** are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Application 2003/0016686 A1 to *Wynee et al.* ("*Wynee*") in view

of U.S. Patent Application No. 2003/0084246 A1 to *Tran et al.* ("*Tran*").

As such to **claim 5**, *Wynee* discloses limitations in the base claim.

Wynee is silent or deficient to the further limitation us using a SRAM circuit.

Tran teaches the further recited limitation above at e.g., figure 3 with respect to buffer memory 31.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Wynee* by clarifying that the cell memory 32 is the a SRAM circuit.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be because SRAM circuits are inexpensive. In particular, *Tran* cures the above-cited deficiency by providing a motivation found at e.g., paragraph 0006 on page 1. Second, there would be a reasonable expectation of success since both references teach storing cells (see e.g., paragraph 0028 on page 2 of *Tran*. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 12**, see similar rejection to claim 5.

As to **claims 14**, see similar rejection to claim 5. In addition see e.g., figure 3 of *Tran* with respect to output SDRAM controller e.g., as state machine 40.

As to **claims 20**, see similar rejection to claim 5.

As to **claim 30**, see similar rejection to claim 5.

As to **claim 43**, see similar rejection to claim 5.

As to **claim 44**, the limitation is met since when the cell is ready to be sent it is stored in cell memory such that the amount of data stored in the blocks of the memory device is equal to a threshold.

11.   **Claims 21 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application 2003/0016686 A1 to *Wynee et al.* ("*Wynee*") in view of "Data and Computer

Communications" to *William Stallings* ("*Stallings*").

As such to **claim 21**, *Wynee* discloses limitations in the base claim.

Wynee is silent or deficient to the further limitation of the Internet.   In particular,

Wynee teaches the transmission of packets.

Stallings teaches the further recited limitation above at page 528-529 since

packets are known to traverse the Internet.

The proposed modification of the above-applied reference(s) necessary to arrive

at the claimed subject matter would be to modify *Wynee* by clarifying that packets are

transmitted over a network where the network is the Internet.

As such, examiner notes that it would have been obvious to one skilled in the art prior to

applicant's invention to include the above limitation. In particular, the motivation for modifying

the reference or to combine the reference teachings would be to allow different parties to

communicate with one another over a known network such as the Internet. In particular,

Stallings cures the above-cited deficiency by providing a motivation found at e.g., page 528

since a known set of networks is the Internet.

As to **claim 31**, see similar rejection to claim 21.

Allowable Subject Matter

12.   **Claims 8, 9, 10, 13, 18, 28, 39 and 40** are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123.

The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Derrick W. Ferris
Examiner
Art Unit 2616

DWF

DERRICK W. FERRIS
PRIMARY PATENT EXAMINER